



SEQUENCE LISTING

<110> DESPRES, Philippe
CATTEAU, Adeline

<120> SMALL PEPTIDES HAVING APOPTOTIC ACTIVITIES AND THEIR APPLICATIONS

<130> 239786US0CIP

<150> US 10/311,213

<151> 2003-05-19

<150> PCT/IB01/01570

<151> 2001-06-18

<150> US 60/212,129

<151> 2000-06-16

<160> 40

<170> PatentIn version 3.1

<210> 1

<211> 45

<212> DNA

<213> Artificial sequence

<220>

<223> 5' primer for M1-40/DEN-1

<400> 1

gacaaacggtt ccgtggctct gtgacacacg tgggacttgg tctag

45

<210> 2

<211> 33

<212> DNA

<213> Artificial sequence

<220>

<223> 3' primer for M1-40/DEN-1

<400> 2

ctattcccag cggccgctag gccattgatg gtg

33

<210> 3

<211> 35

<212> DNA

<213> Artificial sequence

<220>

<223> 5' primer for M1-40/DEN-2

<400> 3
 cacagaagac tgtacagatc agtggcactc gttcc 35

<210> 4
 <211> 35
 <212> DNA
 <213> Artificial sequence

<220>
 <223> 3' primer for M1-40/DEN-2

<400> 4
 atattcctag cggccgctat gtcattgaag gagcg 35

<210> 5
 <211> 42
 <212> DNA
 <213> Artificial sequence

<220>
 <223> 5' primer for M1-40/DEN-3

<400> 5
 agacgcgtgt acagatcagt ggcgttagct ccccatgtcg cc 42

<210> 6
 <211> 43
 <212> DNA
 <213> Artificial sequence

<220>
 <223> 3' primer for M1-40/DEN-3

<400> 6
 gtttccgcgg ccgccacatc ttcattgtcat aggtggggta acc 43

<210> 7
 <211> 40
 <212> DNA
 <213> Artificial sequence

<220>
 <223> 5' primer for M1-40/DEN-4

<400> 7
 agacgagtgt acagctcagt agctttaaca ccacattcgg 40

<210> 8
 <211> 42
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 3' primer for M1-40/DEN-4

 <400> 8
 tgtttccgcg gccgccgcat cgtcatccgt aggatggggc ga 42

 <210> 9
 <211> 44
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 5' primer for M1-40/JE

 <400> 9
 aagcgaatgt acagatccgt gtcggtccaa acacatgggg agag 44

 <210> 10
 <211> 43
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 3' primer for M1-40/JE

 <400> 10
 attgccgcg cgcgcacaat ttcaactgta agccggagcg acc 43

 <210> 11
 <211> 30
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 5' primer for M1-40/WN

 <400> 11
 agacgcatgt acaggtcact gacagtgcag 30

 <210> 12
 <211> 30
 <212> DNA
 <213> Artificial sequence

<220>
 <223> 3' primer for M1-40/WN

 <400> 12
 cattccgcgg ccgctctagc tgtaagctgg 30

 <210> 13
 <211> 43
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 5' primer for M1-40/YF

 <400> 13
 aggaggttgt acagggccat tgacttgcct acgcatgaaa acc 43

 <210> 14
 <211> 43
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 3' primer for M1-40/YF

 <400> 14
 tgtcagtgcg gccgctgcag tgatcatgagt aggccggacc aac 43

 <210> 15
 <211> 23
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 5' primer for M1-30/DEN-2, M1-20/DEN-2 and M9-30/DEN-2

 <400> 15
 ttttggcagt acatcaatgg gcg 23

 <210> 16
 <211> 38
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 3' primer for M1-30/DEN-2 and M9-30/DEN-2

 <400> 16

aagatcgcgg ccgcaattca ctggacatgt ttccaggc 38

<210> 17
<211> 40
<212> DNA
<213> Artificial sequence

<220>
<223> 3' primer for M1-20/DEN-2

<400> 17
tttccgcggc cgctctgatc acatccatgt ttcagttcag 40

<210> 18
<211> 34
<212> DNA
<213> Artificial sequence

<220>
<223> 5' primer for M9-40/DEN-2

<400> 18
tggttctgta catgggaatg ggactggaga cacg 34

<210> 19
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> 3' primer for M9-40/DEN-2, M20-40/DEN-2 and M32-40/DEN-2

<400> 19
tcttcagtt cattcagggc accg 24

<210> 20
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> 5' primer for M20-40/DEN-2

<400> 20
actgaaatgt acatgtcatc agaaggggcc tgg 33

<210> 21

<211> 31
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 5' primer for M32-40/DEN-2

 <400> 21
 atgtcctgta cattgaaact tggatcctga g 31

 <210> 22
 <211> 31
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 5' primer for M1-40/DEN-1 followed by the transmembrane domain of
 mouse CD72

 <400> 22
 tgctggagga atagcagtct taaaaattgg c 31

 <210> 23
 <211> 29
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 3' primer for M1-40/DEN-1 followed by the transmembrane domain of
 mouse CD72

 <400> 23
 tattggtggc ttcccaaadc ctggtcccc 29

 <210> 24
 <211> 29
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 3' primer for M1-40/DEN-1 followed by the transmembrane domain of
 mouse CD72

 <400> 24
 agacacccgg ggatagagaa ctcccaggc 29

 <210> 25
 <211> 54

<212> DNA
 <213> Artificial sequence

 <220>
 <223> 3' primer for M1-40/DEN-1 followed by the KDEL motif

 <400> 25
 taaagcggcc gctcacaact cgtcttttgg gtgtctcaaa gcccaagtct ccac 54

 <210> 26
 <211> 44
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 3' primer for mutant protein C95-114-EGFP-M1-40/YF.wt

 <400> 26
 agagtcgcgg ccgcaaata ggggttcctc accaaccatc tctc 44

 <210> 27
 <211> 61
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> 3' primer for mutant protein C95-114-EGFP-M1-40/YF.17D (T34, I36,
 L37, H39)

 <400> 27
 agagtcgcgg ccgcaaata ggggtgcctc aggatccatg tctcaatctt ttggagttgc 60
 c 61

 <210> 28
 <211> 18
 <212> PRT
 <213> Dengue virus type 1

 <220>
 <221> misc_feature
 <223> Signal sequence

 <400> 28
 Met Asn Arg Arg Lys Arg Ser Val Thr Met Leu Leu Met Pro Thr Ala
 1 5 10 15

Leu Ala

<210> 29
<211> 9
<212> PRT
<213> Dengue virus type 2

<220>
<221> misc_feature
<223> Peptide of the M protein conferring apoptotic activity

<400> 29

Ile Glu Thr Trp Ile Leu Arg His Pro
1 5

<210> 30
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> 5' primer for M1-40/DEN-1 followed by the transmembrane domain of
mouse CD72

<400> 30
gaggcggcta gcgctatggc tgacgctatc acg 33

<210> 31
<211> 40
<212> PRT
<213> Dengue virus type 2

<220>
<221> misc_feature
<223> M1-40/DEN-2

<400> 31

Ser Val Ala Leu Val Pro His Val Gly Met Gly Leu Glu Thr Arg Thr
1 5 10 15

Glu Thr Trp Met Ser Ser Glu Gly Ala Trp Lys His Val Gln Arg Ile
20 25 30

Glu Thr Trp Ile Leu Arg His Pro
35 40

<210> 32
<211> 30
<212> PRT
<213> Dengue virus type 2

<220>
<221> misc_feature
<223> M1-30/DEN-2

<400> 32

Ser Val Ala Leu Val Pro His Val Gly Met Gly Leu Glu Thr Arg Thr
1 5 10 15

Glu Thr Trp Met Ser Ser Glu Gly Ala Trp Lys His Val Gln
20 25 30

<210> 33
<211> 20
<212> PRT
<213> Dengue virus type 2

<220>
<221> misc_feature
<223> M1-20/DEN-2

<400> 33

Ser Val Ala Leu Val Pro His Val Gly Met Gly Leu Glu Thr Arg Thr
1 5 10 15

Glu Thr Trp Met
20

<210> 34
<211> 22
<212> PRT
<213> Dengue virus type 2

<220>
<221> misc_feature
<223> M9-30/DEN-2

<400> 34

Gly Met Gly Leu Glu Thr Arg Thr Glu Thr Trp Met Ser Ser Glu Gly
1 5 10 15

Ala Trp Lys His Val Gln
20

<210> 35

<211> 32

<212> PRT

<213> Dengue virus type 2

<220>

<221> misc_feature

<223> M9-40/DEN-2

<400> 35

Gly Met Gly Leu Glu Thr Arg Thr Glu Thr Trp Met Ser Ser Glu Gly
1 5 10 15

Ala Trp Lys His Val Gln Arg Ile Glu Thr Trp Ile Leu Arg His Pro
20 25 30

<210> 36

<211> 21

<212> PRT

<213> Dengue virus type 2

<220>

<221> misc_feature

<223> M20-40/DEN-2

<400> 36

Met Ser Ser Glu Gly Ala Trp Lys His Val Gln Arg Ile Glu Thr Trp
1 5 10 15

Ile Leu Arg His Pro
20

<210> 37

<211> 40
<212> PRT
<213> Yellow fever virus

<220>
<221> misc_feature
<223> M1-40/YF.17D

<400> 37

Ala Ile Asp Leu Pro Thr His Glu Asn His Gly Leu Lys Thr Arg Gln
1 5 10 15

Glu Lys Trp Met Thr Gly Arg Met Gly Glu Arg Gln Leu Gln Lys Ile
20 25 30

Glu Arg Trp Phe Val Arg Asn Pro
35 40

<210> 38
<211> 40
<212> PRT
<213> Dengue virus type 1

<220>
<221> misc_feature
<223> M1-40/DEN-1

<400> 38

Ser Val Ala Leu Ala Pro His Val Gly Leu Gly Leu Glu Thr Arg Thr
1 5 10 15

Glu Thr Trp Met Ser Ser Glu Gly Ala Trp Lys Gln Ile Gln Lys Val
20 25 30

Glu Thr Trp Ala Leu Arg His Pro
35 40

<210> 39
<211> 31
<212> PRT
<213> Dengue virus type 1

<220>
<221> misc_feature
<223> Sub-sequence of 31 aminoacids of M1-40/DEN-1

<400> 39

Ser Val Ala Leu Ala Pro His Val Gly Leu Gly Leu Glu Thr Arg Thr
1 5 10 15

Glu Thr Trp Met Ser Ser Glu Gly Ala Trp Lys Gln Ile Gln Lys
20 25 30

<210> 40
<211> 9
<212> PRT
<213> Dengue virus type 1

<220>
<221> misc_feature
<223> Subsequence of 9 aminoacids of M1-40/DEN-1

<400> 40

Val Glu Thr Trp Ala Leu Arg His Pro
1 5